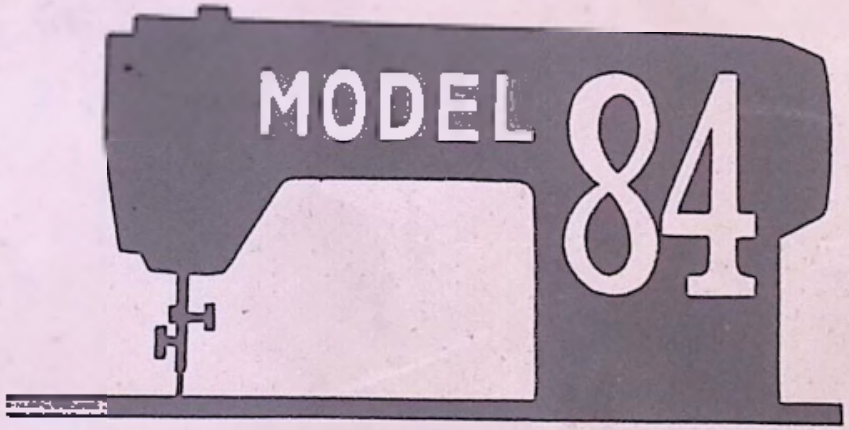
KENMORE

INSTRUCTIONS



ZIG–ZAG SEWING MACHINE

Sears, Roebuck and Co.

Dear Homemaker:

This booklet has been written for you, to help you use and enjoy fully your KENMORE zigzag sewing machine.

In order to obtain the maximum efficiency this machine is capable of, we urge that you read this booklet before using it for the first time.

We feel this Kenmore Zigzag Sewing Machine is the finest of its kind and we are happy to offer help with any questions you may have regarding the machine.

Sincerely,

Jean Shaw

Jean Shaw, Director
Home Economics Laboratory
Department 817
Sears, Roebuck and Co.
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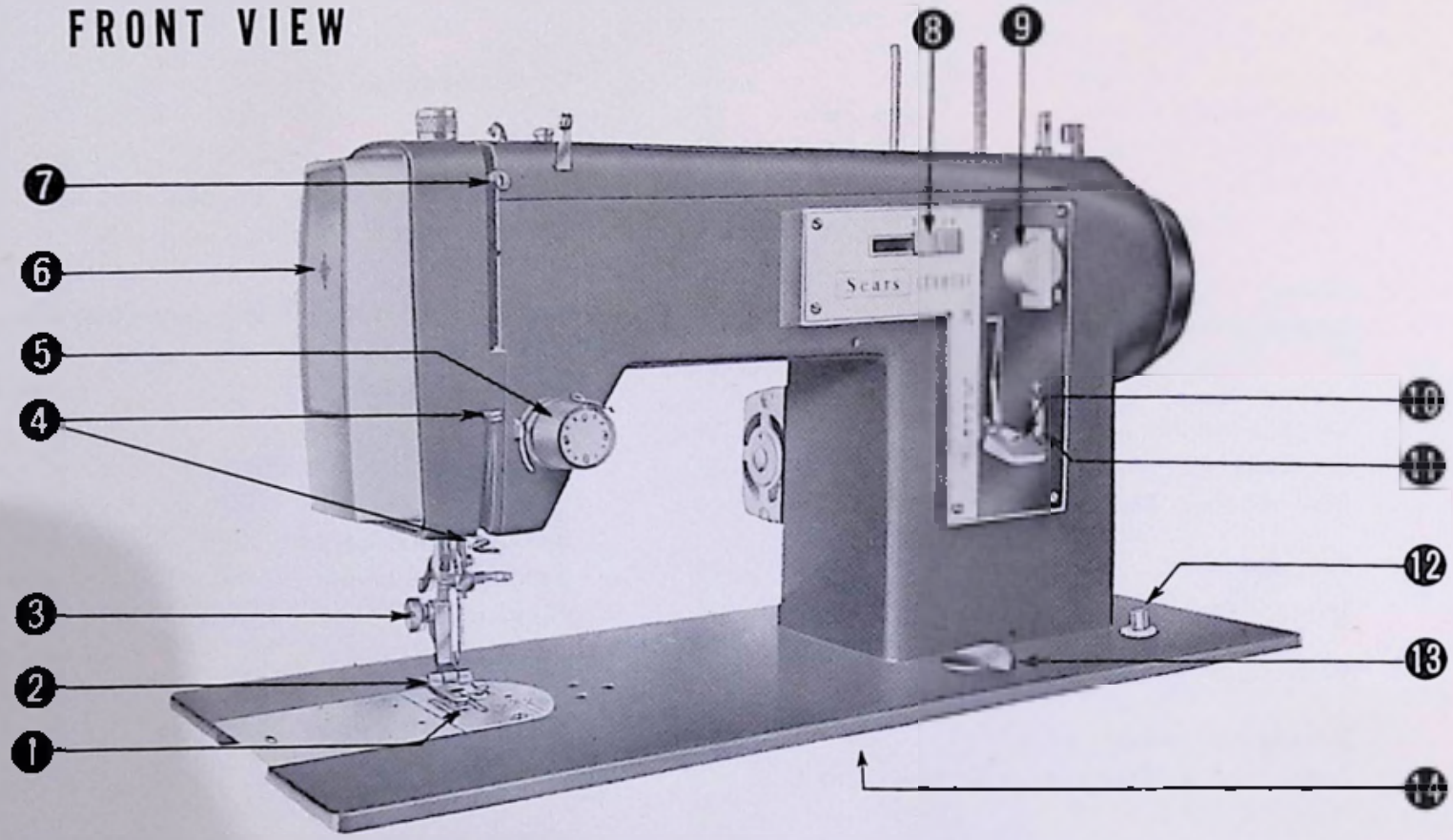
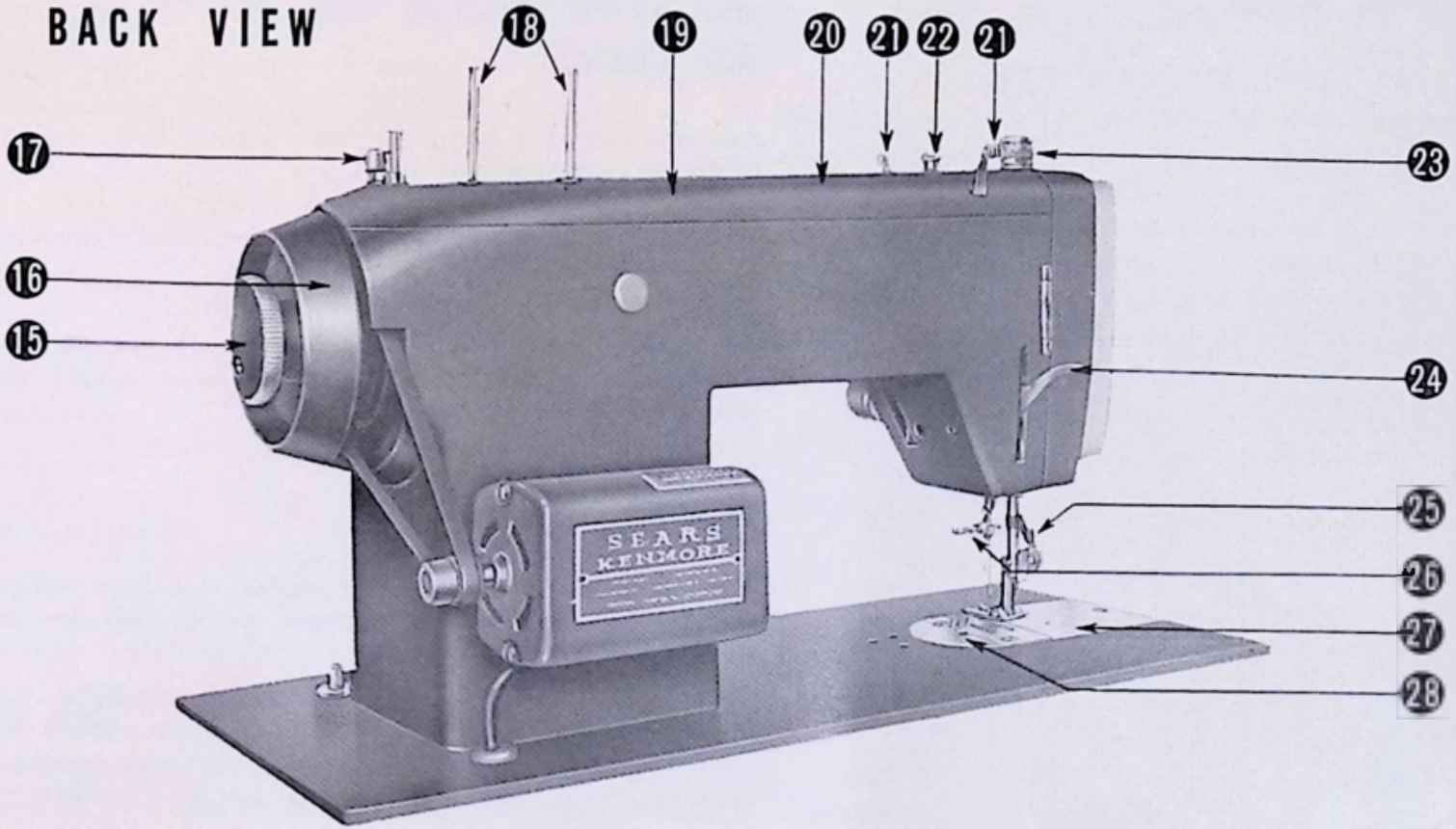
FRONT VIEW

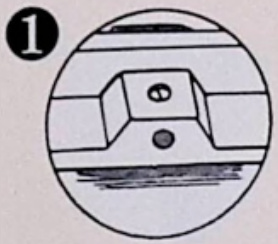


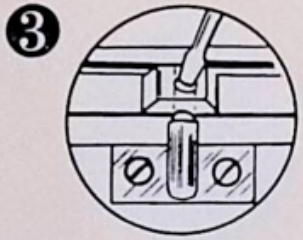
1. Feed Dogs
2. Presser Foot
3. Presser Foot Thumb Screw
4. Thread Guides
5. Thread Tension Assembly
6. Face Cover Plate
7. Thread Take-up
8. Stitch Width Control
9. Buttonhole Control Knob
10. Stitch Length Control Lever
11. Buttonhole Reverse Stitch Length Control
12. Light Switch
13. Feed Dog Control Knob
14. Nomenclature Plate

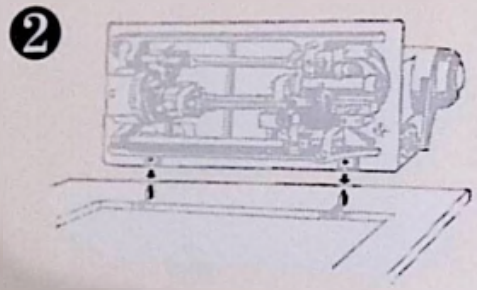
BACK VIEW

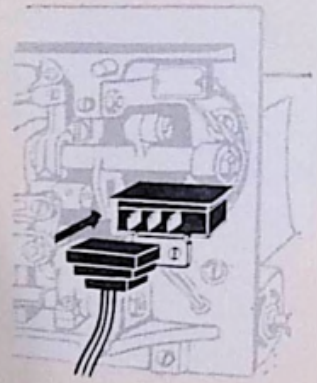


15. Clutch Knob
16. Hand Wheel
17. Bobbin Winder Mechanism
18. Thread Spool Pins
19. Arm Cover Plate
20. Decorative Stitch Mechanism Cover
21. Upper Thread Guides
22. Bobbin Winder Tension Disc
23. Presser Foot Knob
24. Presser Foot Lever
25. Thread Cutter
26. Needle Clamp Screw
27. Hand Hole Cover Plate
28. Needle Plate









INSTALLING MACHINE HEAD IN PORTABLE AND CABINET

Loosen the two hinge screws under holes in the rear edge of the machine bed (1).
Raise hinge pins in the cutout (2).
Slip machine head onto the pins and tighten hinge screws securely (3).
Lower machine head to front flap.

Lay the plastic discs over the spool pin hole on the arm cover plate. Screw pins in place. Discs and pins are packed in accessory box.

SEWING LIGHT

The sewing light is placed inside the face cover plate as shown. It may be turned on or off by pushing light switch.

To remove bulb, disconnect sewing machine, open the face cover plate by swinging it open, push bulb in slightly, turn it away from you and remove. To replace, turn new bulb in and turn it toward you(4).

CONNECTING MACHINE

Push the plug onto three prong connector under the machine bedplate (5).

Plug machine cord into any 110 - 120V wall outlet.

NEEDLE AND THREAD TABLE

THREAD SIZE	NEEDLE SIZE	FABRIC
Cotton 60-100 Synthetic Silk A Machine embroidery	11	Sheer cottons, silks, and synthetics Fine laces
Cotton 60-80 Mercerized 50 Synthetic Silk A Machine embroidery	14	Medium weight cottons Medium weight silks Medium weight synthetics Light weight woolens
Cotton 40-60 Mercerized 50 Mercerized heavy duty	16	Heavy weight cottons Medium to heavy weight woolens Heavy drapery fabrics
Cotton 30-50 Mercerized heavy duty	18	Heaviest cottons as for men's work clothes Heaviest woolen coating

NEEDLE SIZE

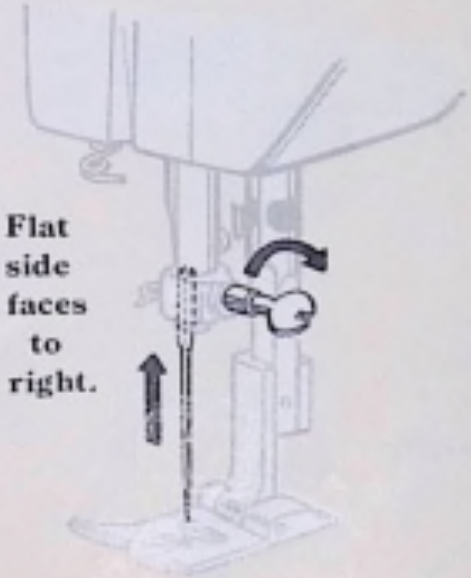
Use KENMORE 6021 needles. The size of the needle should conform to the size of the thread and both should be suitable to the material. The same size thread should be used in the bobbin as on the upper part of the machine for ordinary sewing. Never use a bent needle or one with a blunt point.

This is the exact length of the needle to be used in your machine. Comparison with this illustration will determine whether the needle you have is the correct one for your machine.

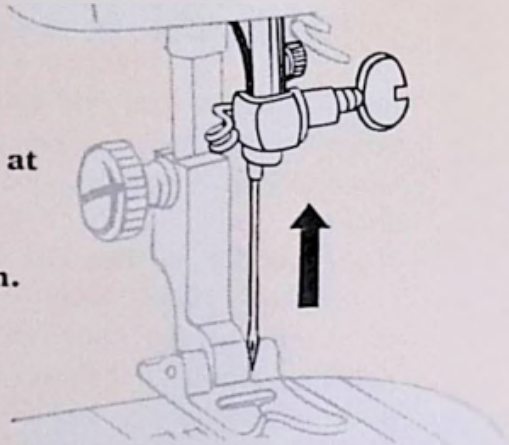
PLACEMENT OF NEEDLE

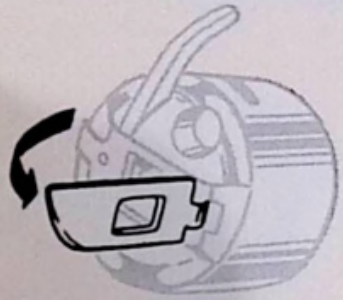
Raise needle bar to its highest position by turning hand wheel toward you. Loosen needle clamp screw.

Hold needle so that the flat side is to your right, slip blunt end of needle as far as it will go into needle clamp. Tighten needle into place with needle clamp screw.



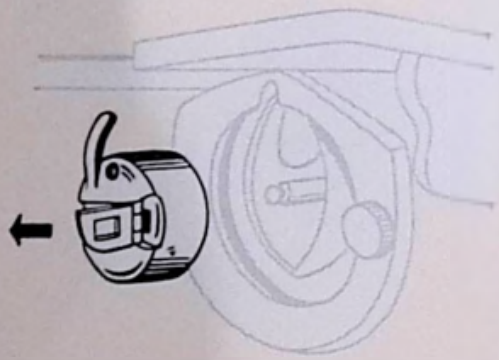
Needle at its highest position.



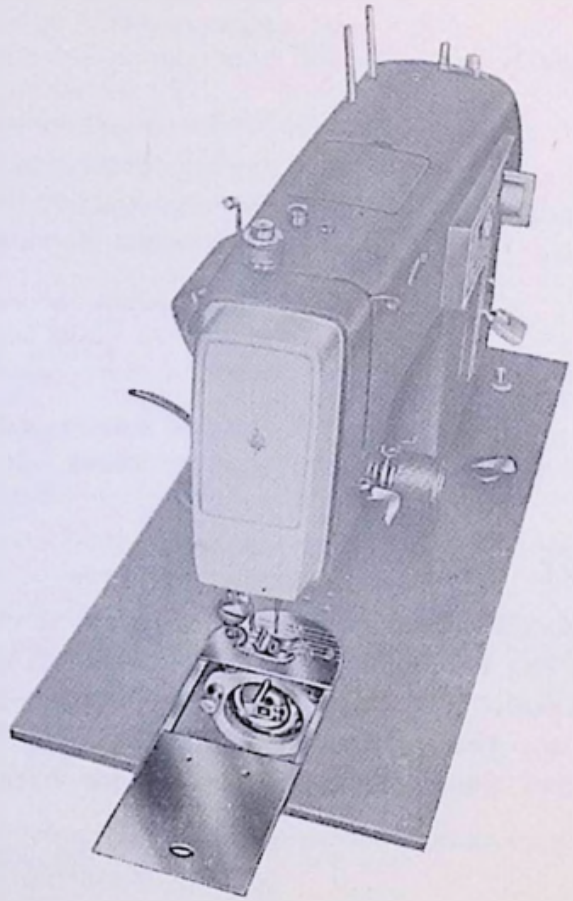


Pull out latch.

Pull bobbin case straight out.



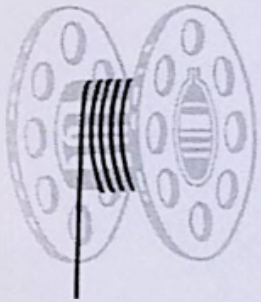
REMOVING BOBBIN CASE FROM SHUTTLE



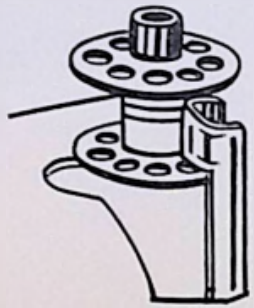
WINDING THE BOBBIN

❶ Place thread on spool post. Draw thread as shown.

❷ Wind thread around bobbin a few times.

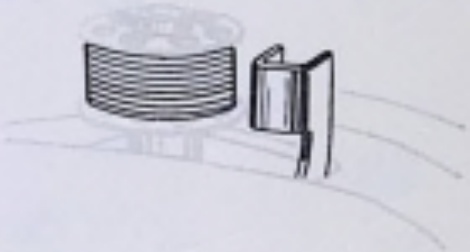


❸ Place bobbin onto bobbin winder shaft. Push bobbin winder latch until it clicks.

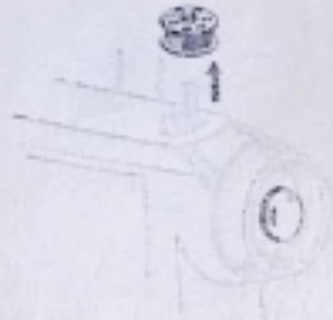


❹ Release clutch by turning clutch knob toward you. Start machine.

❺ When bobbin is full, winding mechanism stops automatically.

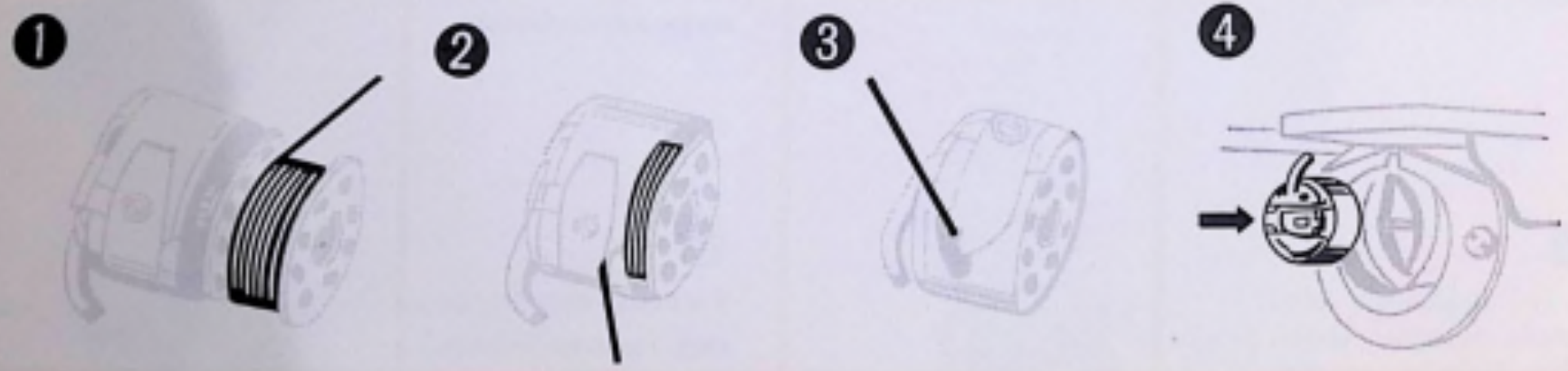


❻ Tighten clutch knob and remove bobbin.

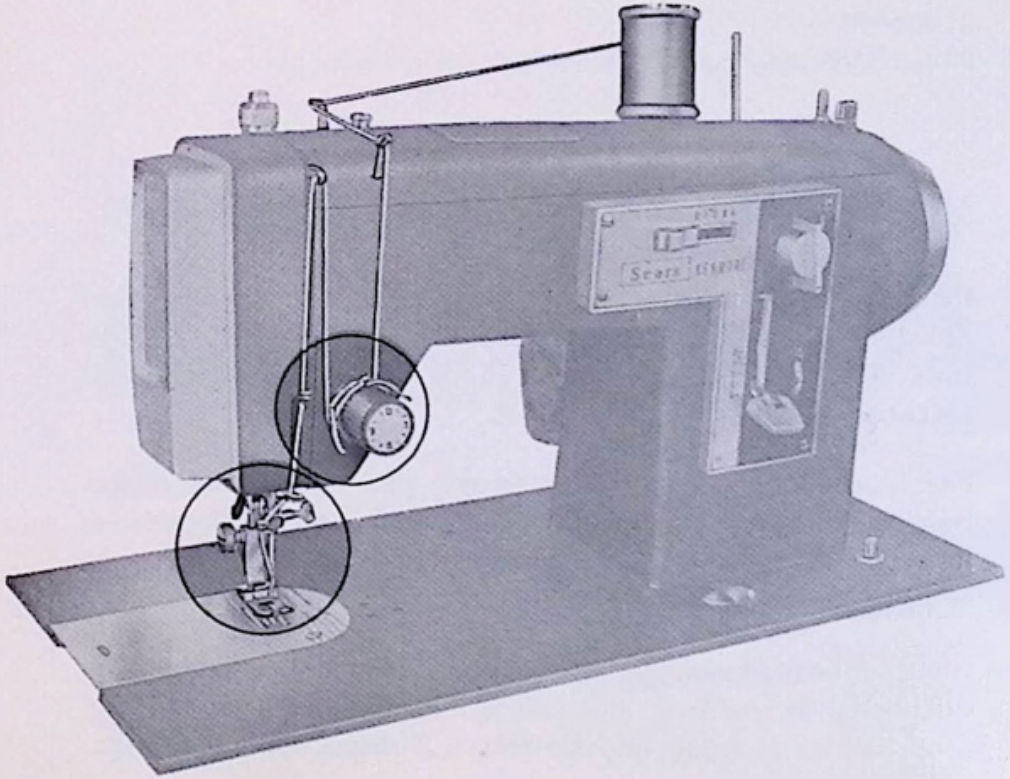


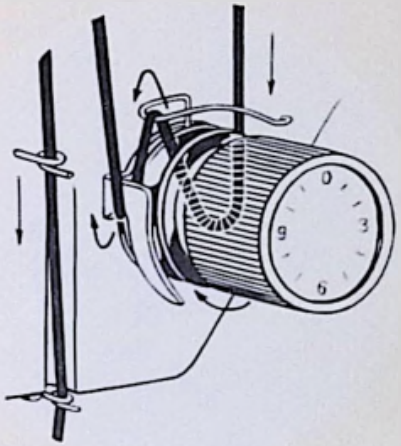
INSERTING BOBBIN INTO BOBBIN CASE.....CASE INTO SHUTTLE

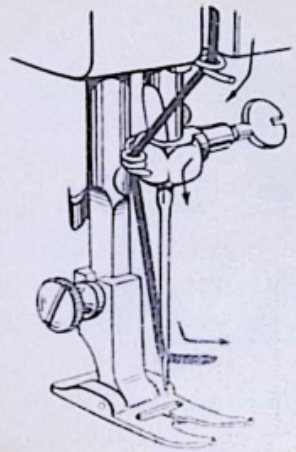
1. Guide bobbin onto center pin of bobbin case.
2. Pull thread through slot.
3. Pull thread under tension spring.
4. Holding latch, position case into shuttle, release latch.

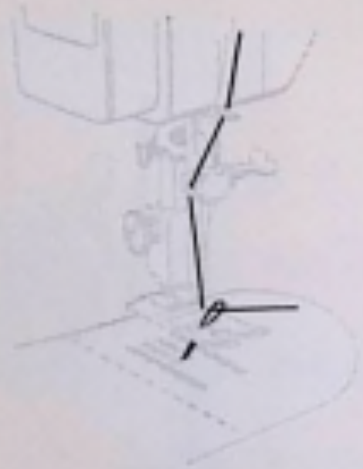


THREADING UPPER MACHINE



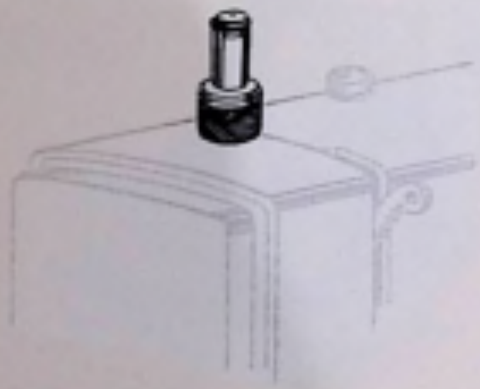






PICKING UP BOBBIN THREAD

Raise presser foot lever.
Hold needle thread loosely in left hand and rotate hand wheel toward you one complete turn.
Bring bobbin thread up by pulling upper thread (See illustration).
Place threads back under presser foot.



ADJUSTING THE PRESSURE OF THE PRESSER FOOT

Push down outer ring of presser foot knob (See illustration). This will release pressure of presser foot. To increase pressure, push down inner pin until suitable pressure is obtained.

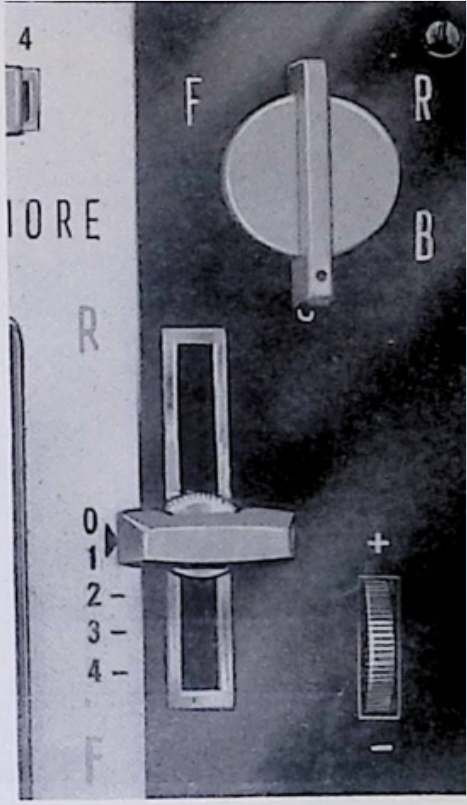
For ordinary sewing, the inner pin should be about half way down. When sewing multiple thickness or heavy material, reduce the pressure. Increase it when sewing sheer fabrics.

Insufficient pressure may cause skipped stitches or difficulty in guiding the fabric. If feed dog or presser foot marks appear on the fabric,reduce the pressure.

SETTING STITCH LENGTH

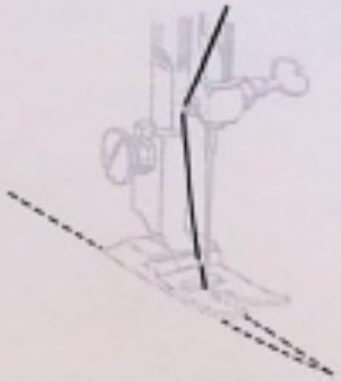
For all sewing procedure other than buttonhole making, the buttonhole control knob should be set on C for center needle position.

Unscrew stitch length lock screw. Move stitch length control lever so lower stop is set at the desired point between 0 and 4. Tighten stitch length lock screw. The 4 setting is the longest stitch. The size of the stitch selected will depend on the fabric sewn. (See chart on page 5).



REVERSE STITCHING

Move lever up and hold. Release lever to return to original position for forward stitching. It is best to begin and end most seams with reverse stitching, often called back tacking.



FASTENING A SEAM

Be sure both threads are drawn back under the presser foot. Lower needle into fabric about 1/2 inch from beginning of seam. Push stitch length control lever up for reverse stitching. Stitch in reverse until needle reaches beginning of seam.

Move stitch length control lever down for forward stitching and complete seam. When you reach the end, raise the stitch length control lever and sew back over 1/2 inch of completed seam.

ADJUSTING TENSIONS

❶

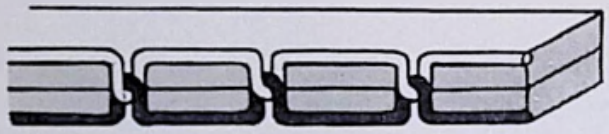


Fig. 1

A perfect stitch will have threads locked between the two layers of fabric with no loops on top or bottom. (Refer to page 19)

PROBLEM

REMEDY

❷ Upper thread too tight

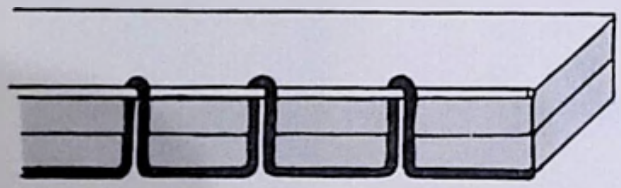
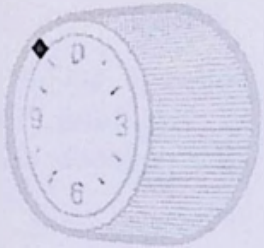


Fig. 2



Decrease Tension

❸ Upper thread too loose

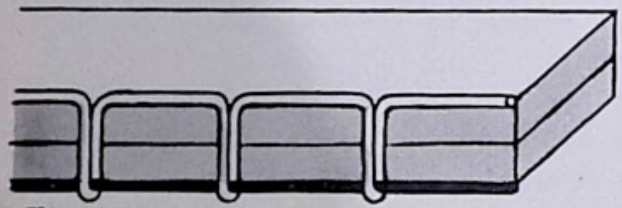
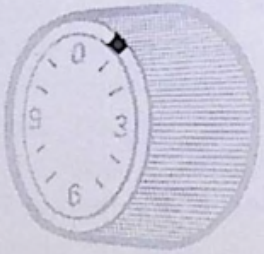


Fig. 3



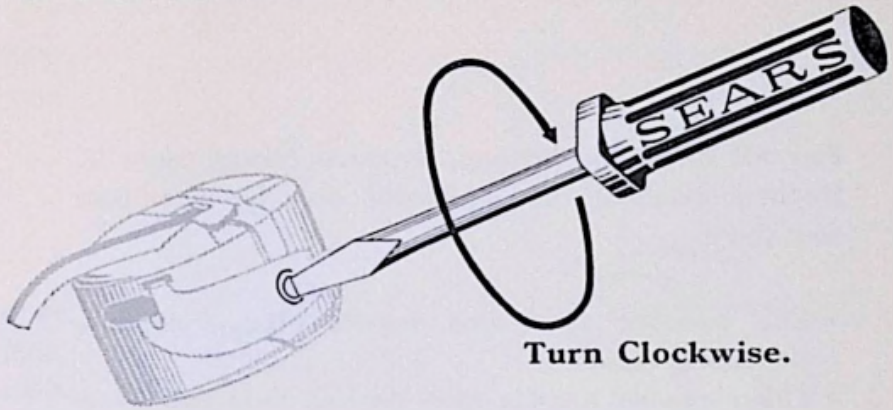
Increase Tension

When stitching is unsatisfactory as in figures 2 and 3, adjust the upper thread tension. Lower thread tension requires adjustment less frequently than the upper thread tension.

When stitch is satisfactory as in figure 1 and seam is badly puckered, the cause may be tight tensions and both upper and lower may be adjusted. (See page 19)

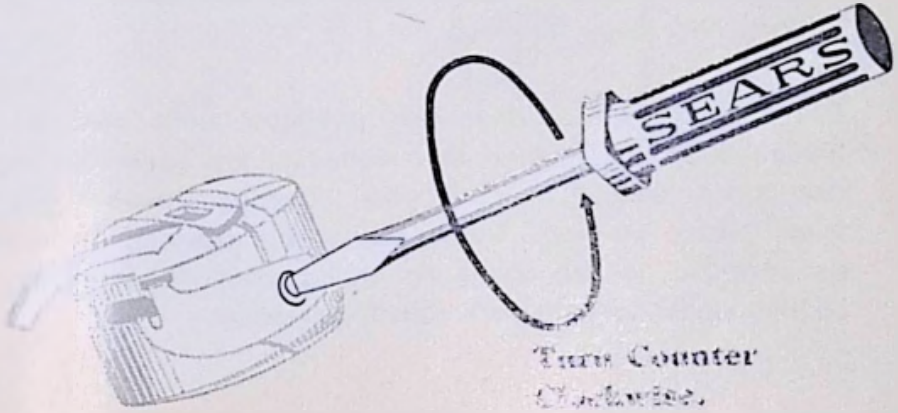
When adjusting the tension on the bobbin case, make slight adjustments with a screwdriver. (See page 19)

INCREASE TENSION



Turn Clockwise.

DECREASE TENSION



Turn Counter Clockwise.

INSERTING AND REMOVING THE MATERIAL

For all kinds of sewing, consult chart page 5. Before placing the material on the machine see that:

* The presser foot and needle clamp screws are both tight.
* The sizes of needle and thread suit the kind of work to be done.
* The needle and take-up lever are at their highest position.
* The tensions have been properly adjusted.
* The ends of the threads have been drawn about 4 inches to the rear of the machine.
* The feed dogs are up.

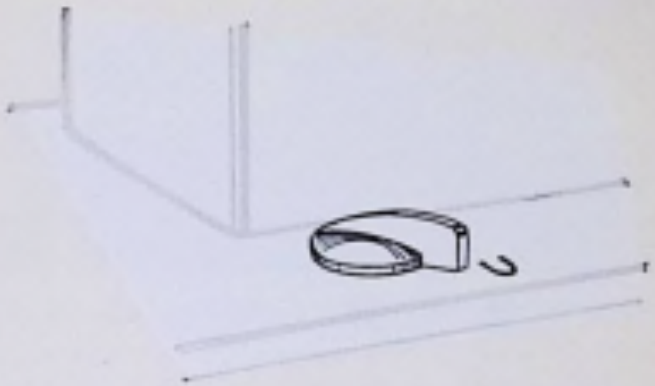
Place material under the presser foot and insert the needle into the material by turning the hand wheel toward you. Lower presser foot. Start sewing. Experiment by sewing on the fabric to be used to determine tension adjustment and correct stitch settings.

To remove the work, first turn the hand wheel toward you until the needle is at its highest position, then raise the presser foot, draw material to the rear and cut off excess thread with the thread cutter located on the presser bar. To avoid sewing off the end of material, back tack each seam. See page 11.

IMPORTANT: Always turn the hand wheel towards you! When machine is not being used, place a piece of material over the feed dog and lower the presser foot. Always have fabric under the presser foot when operating the machine. Operating threaded machine without fabric will cause it to jam by forcing lint into the shuttle. See page 25.

TURNING A CORNER

Stop sewing machine with needle in fabric. Raise presser foot. Turn fabric. Lower presser foot and continue stitching.

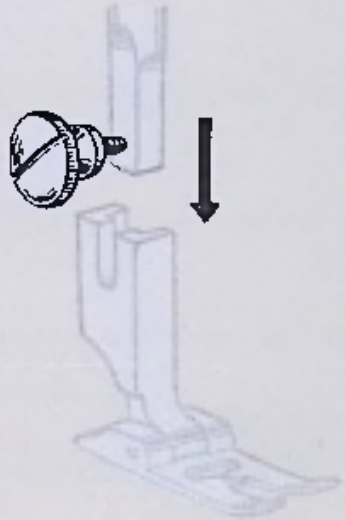


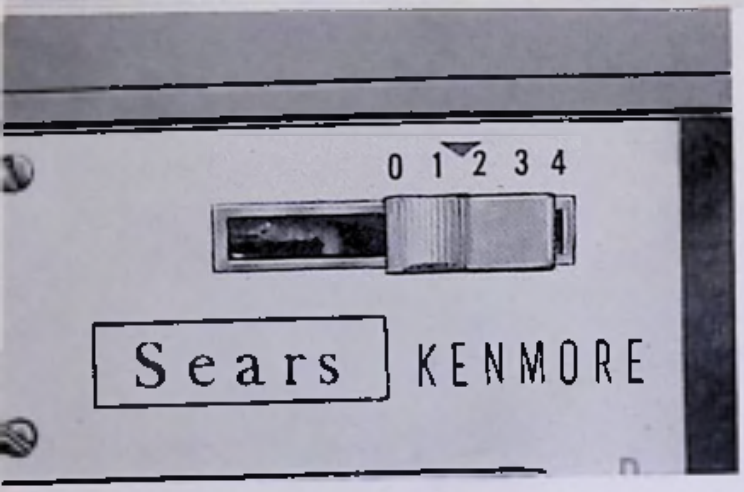
DROP FEED CONTROL

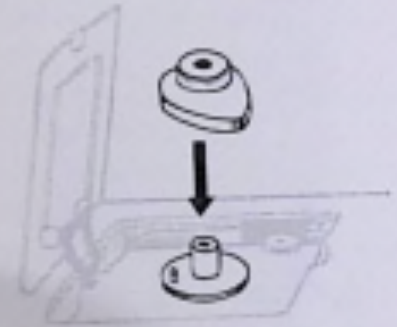
The feed dog control knob is situated on right front of machine bedplate. When knob is turned to the left, feed dog drops and does not pull material. This allows the operator freedom of movement of material, as for darning.
For regular sewing, turn knob to the right.

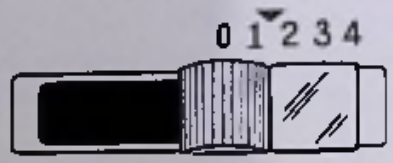
CHANGING THE ATTACHMENT FOOT

The various attachment feet available for certain kinds of work are to be fastened to the presser bar. To attach the foot, raise the presser bar to its highest position by raising the presser foot lever. Loosen the presser foot thumb screw, choose the proper foot, insert from the front. Tighten the screw using the large screw driver and make sure that the foot is secure.









ZIGZAG CONTROL

Press stitch width control and move so right edge of control is aligned with setting desired. Zigzag width increases from setting 0 to setting 4. Straight stitching is possible only with the control in the extreme left position.

DECORATIVE STITCHING

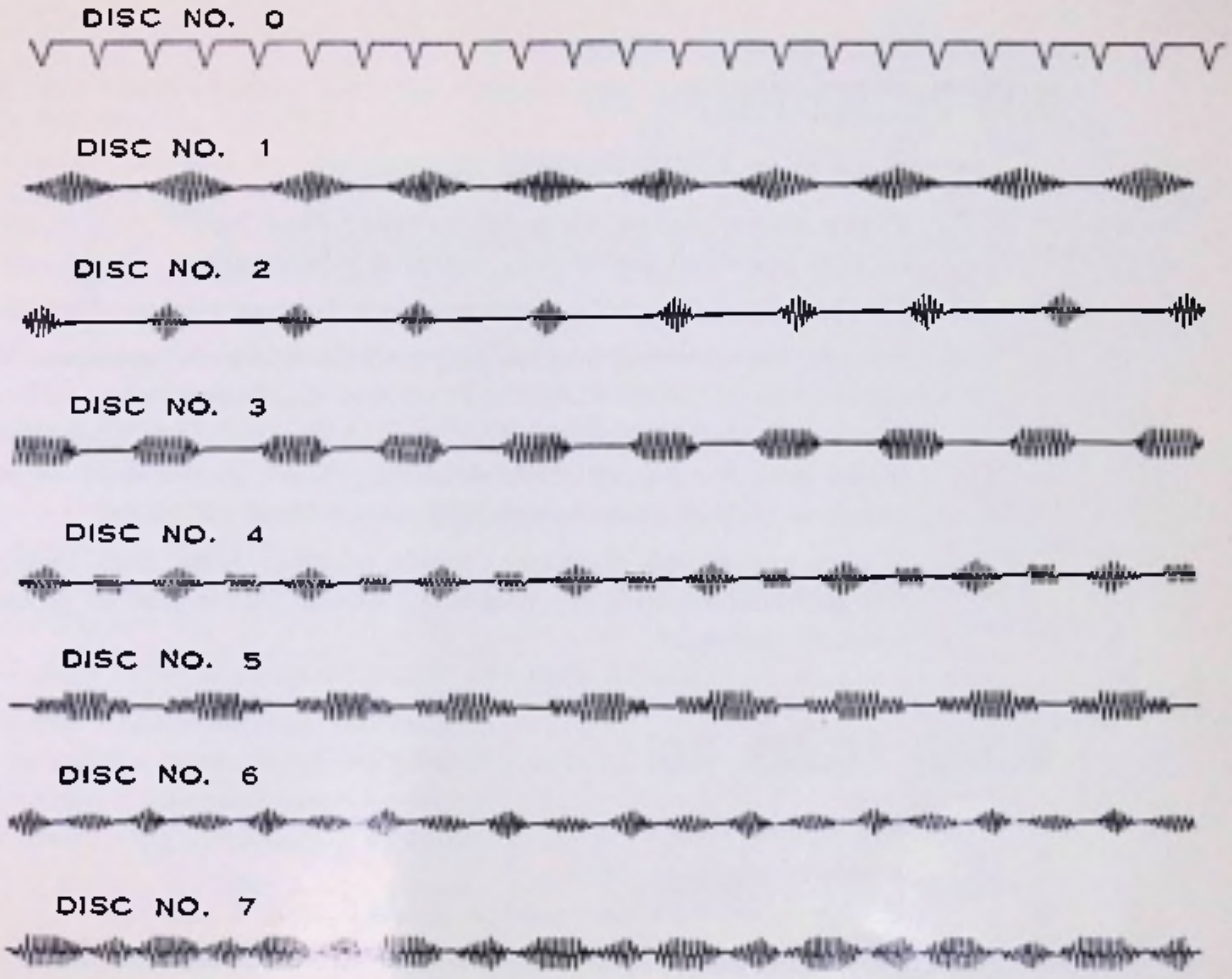
This machine can sew beautiful decorative and embroidery stitches by means of various discs supplied with the machine. The movements of the needle are controlled by the disc.

The stitch length specified is for an average pattern of decorative sewing. When a looser or tighter pattern of stitching is preferred, it is achieved by setting the stitch length to a shorter or longer stitch to suit your preference.

INSERTING THE DISC

1. Turn handwheel so that the needle is in its highest position.
2. Push stitch width control to the RIGHT and keep it there during insertion.
3. Pull decorative stitch mechanism cover open. Grasp knob of pattern disc and slip onto the shaft. Turn disc slightly until it slips down and the retaining pin enters hole in disc.
4. Return stitch width control to LEFT position.

DECORATIVE STITCHES



Stitch width 0

Stitch length about ½

DARNING

WITH PRESSER FOOT:

1. Turn feed dog control to left.
2. Press down outer ring of presser foot knob, see page 10. With presser foot knob in this position mending, darning, monogram work, etc. may be done.
3. Stretch fabric tightly between two spring embroidery hoops and place under needle.
4. Lower presser bar so thread will have some tension. When you start to darn, move fabric back and forth to cover darning area. Then turn fabric and continue sewing at right angles to the previous stitching. Use medium machine speed. You can make any length stitches desired. Slow movement of fabric will make short darning stitches. Fast movement will make long stitches.
5. When you finish darning, raise presser foot and remove fabric. Increase pressure for general sewing by pressing down inner pin of presser foot knob. Turn feed dog control to right.

WITHOUT PRESSER FOOT:

1. Turn feed dog control to left.
2. Remove presser foot.
   Proceed as directed under steps 3 and 4 above.
3. When you finish darning, raise the presser foot lever and remove fabric. Replace presser foot and increase pressure for general sewing. Turn feed dog control to right.

ADJUSTING YOUR SEWING MACHINE FOR GOOD STITCHES

When your sewing machine does not sew a properly locked stitch, check the following:

1. Insert a new needle of the correct size for the thread and fabric you are using. Consult chart on page 5 for needle size.
2. The upper and bobbin thread should be matched in size and type.
3. Check threading carefully. See page 9.
4. Check the thread tension balance. Use mercerized thread, and a correct size needle for the fabric you are using. Do not try this test with synthetic thread as it will not break.

   Begin with a full bobbin, properly threaded into the case. Set the stitch length at about 12 stitches per inch. Fold a 6" square of your fabric in half diagonally, forming a triangle. Make a line of stitching ½" from fold.

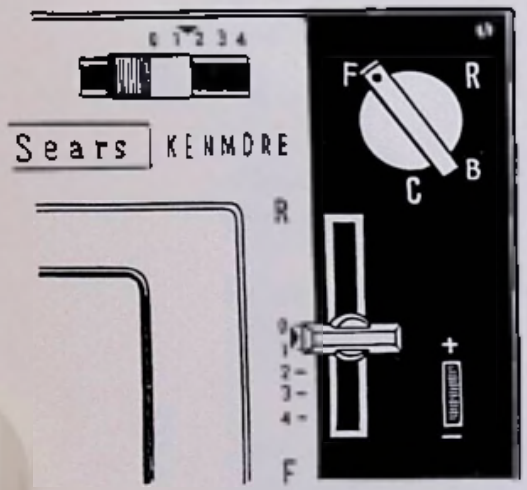
   a. If seam is puckered - both tensions are too tight.
   b. If the bottom thread lays on the fabric - tighten upper thread tension, and repeat test. See page 14, Figure 3.
   c. If the top thread lays on the fabic - loosen upper thread tension, and repeat test. See page 14, Figure 2.

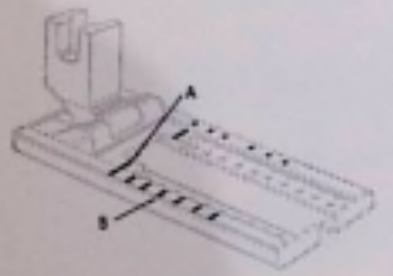
   Grasp the stitching and pull with a snap to make threads break.

   a. If both threads break - tensions are balanced.
   b. If neither thread breaks - both tensions are too loose.
   c. If upper thread breaks - loosen upper tension.
   d. If lower thread breaks - tighten upper tension.

Both threads do not have to break at the same place, but they should break on the same snap.

Bobbin tension may be reset by the following procedure. Start with a loose bobbin thread tension. Tighten the spring screw gradually until bobbin case and full bobbin can be gently lifted from your hand by the end of the bobbin thread.





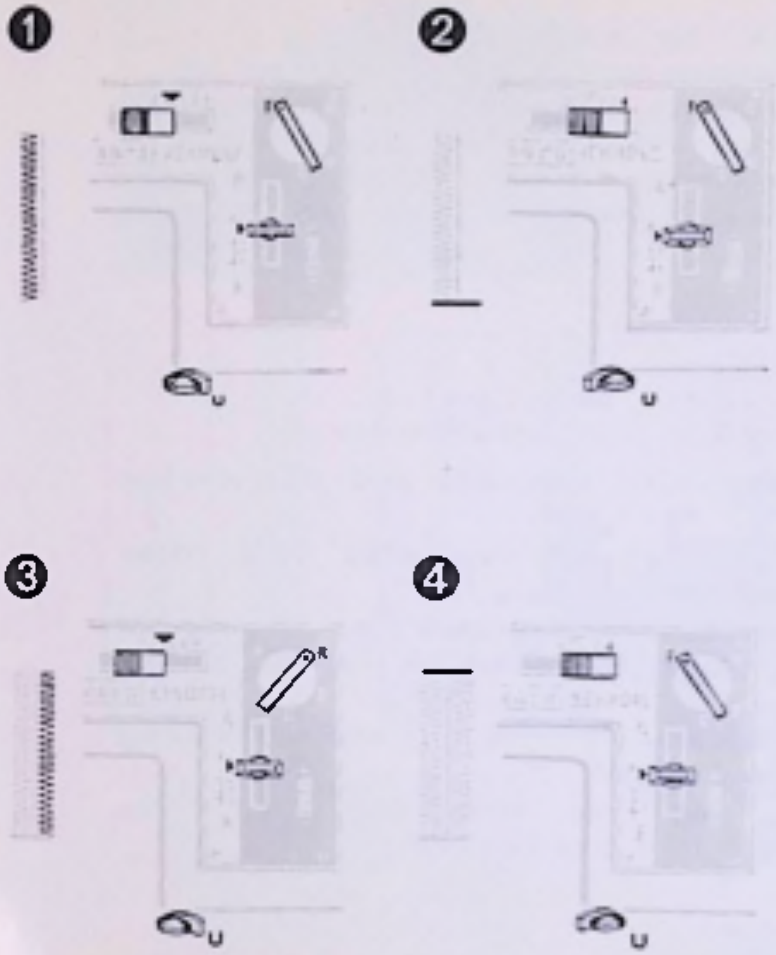
BUTTONHOLE WITH SPECIAL BUTTONHOLE FOOT

Stitch width control at arrow mark
Stitch length control at arrow mark
Buttonhole reverse stitch length control; red line at about center of dial
Special buttonhole foot
Feed dog control U
Buttonhole control knob F

Mark buttonhole length at both ends. Without lowering the foot, let the needle pierce the fabric at the beginning of the buttonhole. The buttonhole length will be the distance between the needle and the front edge of the sliding portion of the foot. Set the front edge of the foot at the mark on the opposite end of the buttonhole. Lower the foot.

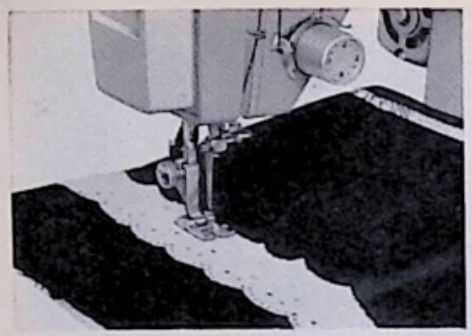
1. **Stitch forward until front edge of the foot is reached.**
2. **With needle out of material, increase stitch width to 4 and drop feed dog. Pierce fabric with needle, take about 4 stitches to bartack.**
3. **With needle out of material, slide stitch width control back to the arrow mark, set buttonhole control knob on "R", raise feed dog, sew to the other end of the buttonhole.**
4. **With needle out of material, set stitch width on 4, lower feed dog and bartack 3 or 4 stitches. Raise feed dog.**

Reproduction on identical size buttonholes is facilitated with the aid of the graduations on the left side of the buttonhole foot. These graduations are ⅛ inch apart. Just mark the starting points of the buttonholes, let the needle pierce the fabric and set the index mark (A) on the upper portion of the foot at the same graduation mark (B) as it was set for the first buttonhole. Lower the foot. Follow steps 1 to 4 outlined in buttonhole instructions.



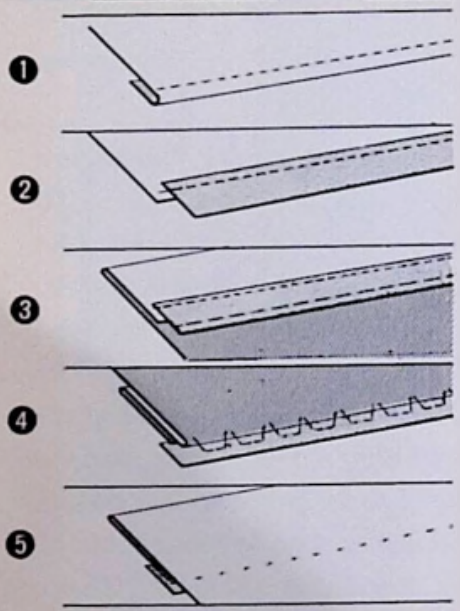
Always make a practice buttonhole on a scrap of fabric used in the garment, using a double thickness of fabric, and an interfacing if used in garment. Increase width setting for a wider buttonhole; decrease for a narrower buttonhole, depending on type of fabric used.

The stitch length may be varied slightly by the stitch length control lever within the 0 to 1 range. To increase forward stitch move this lever from the arrow mark toward 1, to decrease move it toward 0. The buttonhole reverse stitch length control is used to match the length of the reverse stitches with the forward stitches. Turn the dial down for shorter stitches and up for longer stitches. Generally only a slight adjustment of this control is required. Excessive movement of this control will alter the forward stitch length and may reverse the forward motion. These settings may vary depending on type of fabric used.



SEWING ON LACE

Set stitch width to 1. Set stitch length to 1 or 2. Place fabric under the presser foot and place lace on top of fabric overlapping edge by 1/4 inch. Start sewing with needle at the left side. Position fabric and lace so that needle goes into left edge of lace. To sew two pieces together to make a continuous pattern, use the same method.



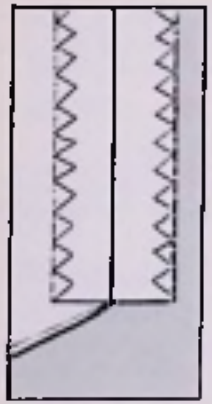
BLIND STITCHING

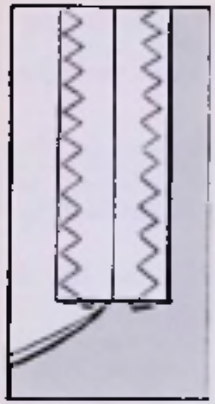
Use disc 0
Buttonhole control knob on B
Stitch width to 0
Stitch length to 2–4

1. Prepare the hem with a turned and edgestitched finish or;
2. Apply seam tape along the raw edge with either straight or zigzag stitching.
3. Then hem and baste about 1/8 inch from the edge of the seam tape using longest stitch on the sewing machine.
4. Fold garment back along basting line and stitch along garment fold using disc 0.
5. Remove basting and press hem. The basting step may be eliminated in a straight hem.

SEWING ON BUTTONS

Center holes in button in slit in presser foot. Lower presser foot to hold securely. Drop feed dogs. Turn handwheel by hand until needle goes into hole in button. Adjust stitch width so that needle goes into second hole and lock. Stitch a number of times to hold securely.





APPLIQUE

Baste cutout applique to fabric. Set stitch width 2 to 4. Set stitch length about 1/2. Zigzag stitch around applique completely covering the raw edge.

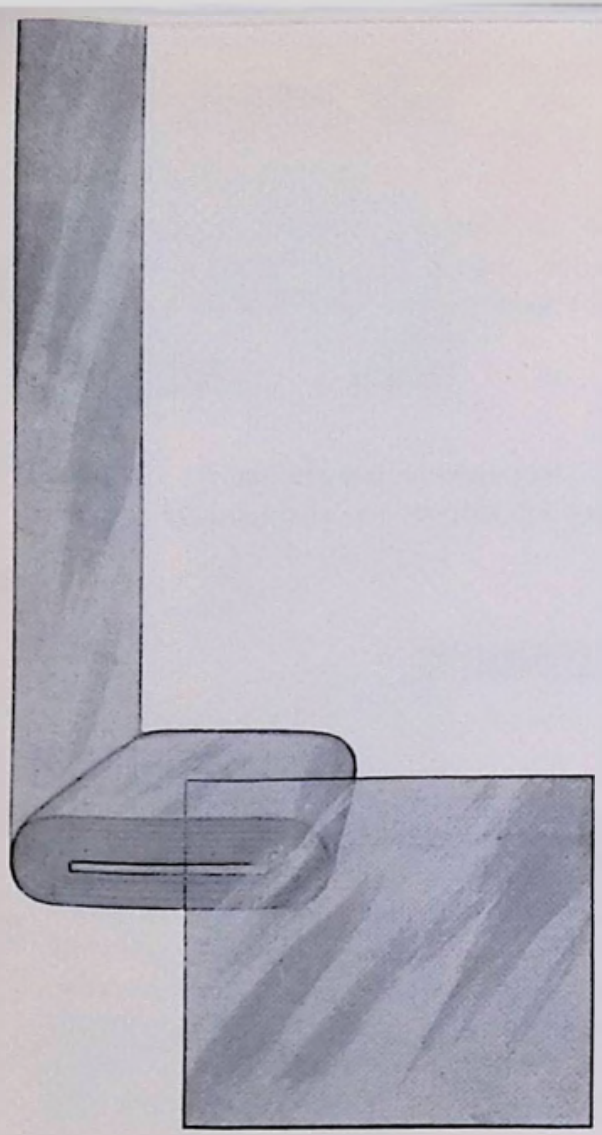
OVERCASTING

Set stitch width to 4. Set stitch length at 3. Zigzag stitch around raw edge of fabric to completely cover the edge.

WRITING AND MONOGRAMMING

Free Hand
Stitch width at 0 to 4
Feed dog control Down

Draw initials or words to be sewn on fabric and fit fabric into embroidery hoops. Writing is done with either zigzag or straight stitching. Remove presser foot. Set stitch width for straight or zigzag stitches as desired. Slip hoop and fabric under the needle, lower presser bar and take one stitch to raise bobbin thread through fabric. Using a medium speed, stitch along marked outline, guiding fabric carefully by hand.



SYNTHETICS

Your KENMORE will sew all the new fabrics of synthetic fiber, such as nylon, * Orlon **Dacron, rayon, acetate, blends of these, and combinations of synthetic and natural fibers. When stitching a fabric of blended or combined fibers, handle it as you would a material of the fiber present in the largest percentage. For example, a fabric woven of 60% Orlon and 40% silk should be handled as one made entirely of Orlon.
When stitching a fabric that is over 50% synthetic fiber, remember:

a. Select patterns of the loose fitting type with cap or kimono sleeves, because most synthetic fiber fabrics cannot be eased with steam pressing, and are not absorbent.

b. Use a synthetic thread.

c. Use a fine needle as recommended in chart on page 5.

d. Wind the bobbin in the usual way, but do not pass thread between tension discs. Guide thread by hand for a smoothly wound bobbin.

e. Choose the stitch length that gives the most satisfactory seam.

f. Check thread tensions by sewing on a double thickness of the fabric to be used. Usually the upper thread tension must be loosened. Sometimes both bobbin and upper thread tensions must be loosened (page 12, 13).

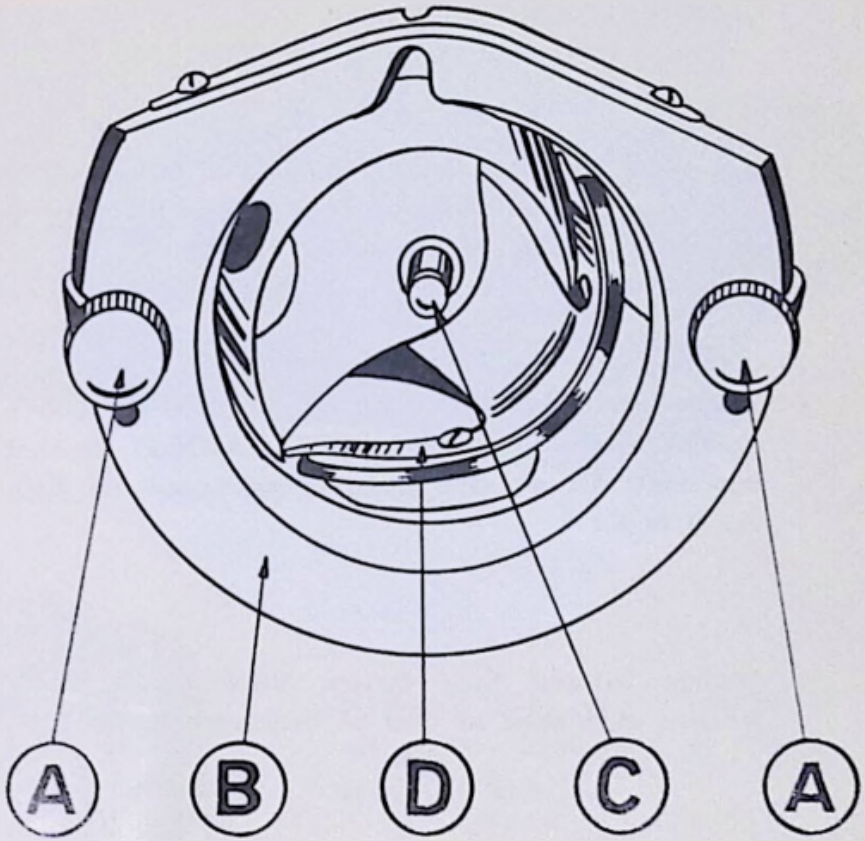
SEWING ON PLASTIC FILMS

Set the machine with normal thread tensions and a large size stitch. Use a fine needle and mercerized thread. Hold plastic pieces together with cellophane tape or paper clips rather than pins. Sew corners slightly rounded rather than square.

* Trademark for DuPont's Acrylic fiber. **Trademark for DuPont's Polyester fiber.

REMOVING LINT

1. Turn hand wheel toward you until needle is at its highest position. Remove bobbin and bobbin case.
2. Push buttons (A) sideways.
3. Remove shuttle race cover (B). Then pull out shuttle (C) by grasping axle.
4. Remove accumulated lint and thread from all parts of shuttle race.
5. Replace shuttle in race body, with axle facing out, forming a perfect circle with driver (D)
6. Replace shuttle race cover (B), then insert bobbin and bobbin case.
7. Do not attempt to force any of the above operation.
8. Occasionally remove the needle plate and clean feed dog with a soft brush.

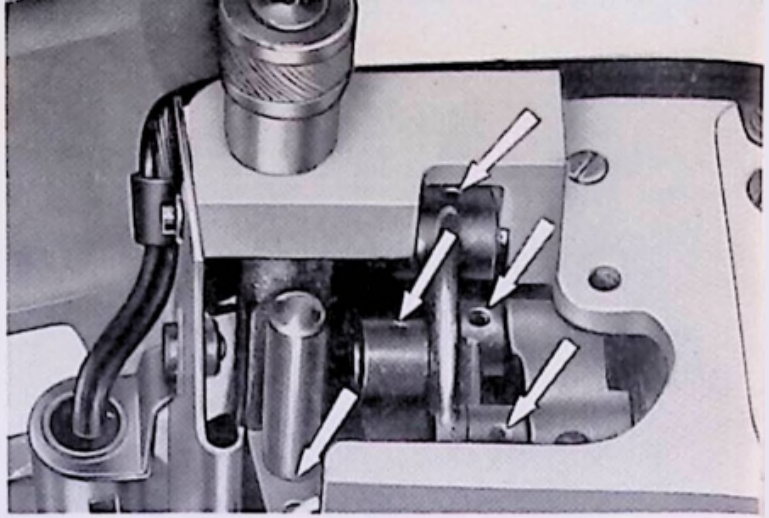


CLEANING AND OILING.....

Keep the moving parts from dust and threads for quiet and efficient operation. Cleaning should be done with a small brush.

When machine runs hard or makes excessive noise, place a drop of KENMORE sewing machine oil at the points indicated in figs. A, B & C.

Swing hinged face cover plate open to oil points indicated at end of machine head.



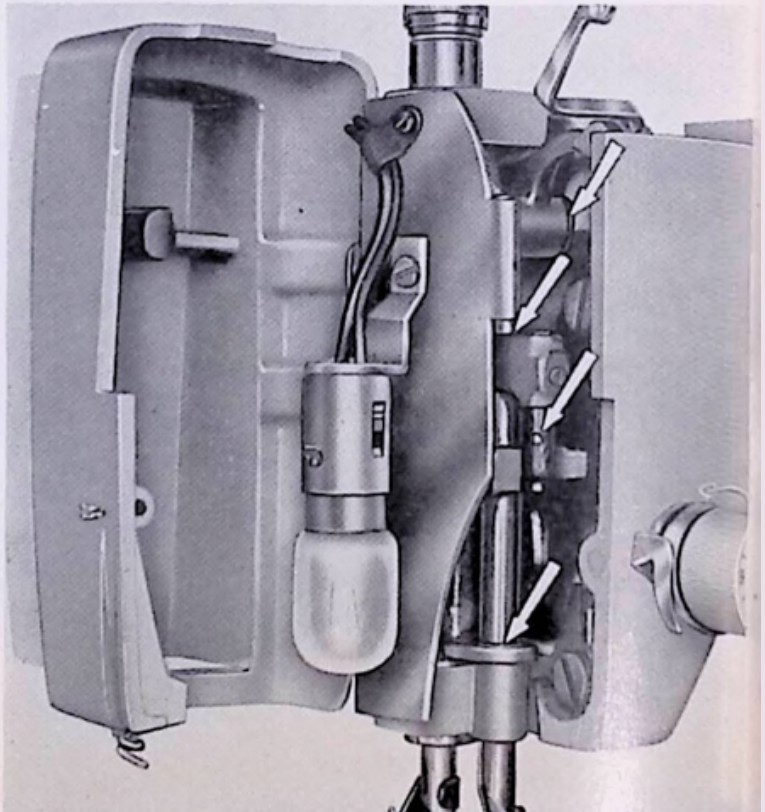


Fig. A

OILING MACHINE

Tilt machine head back to oil points indicated on underside of machine head.

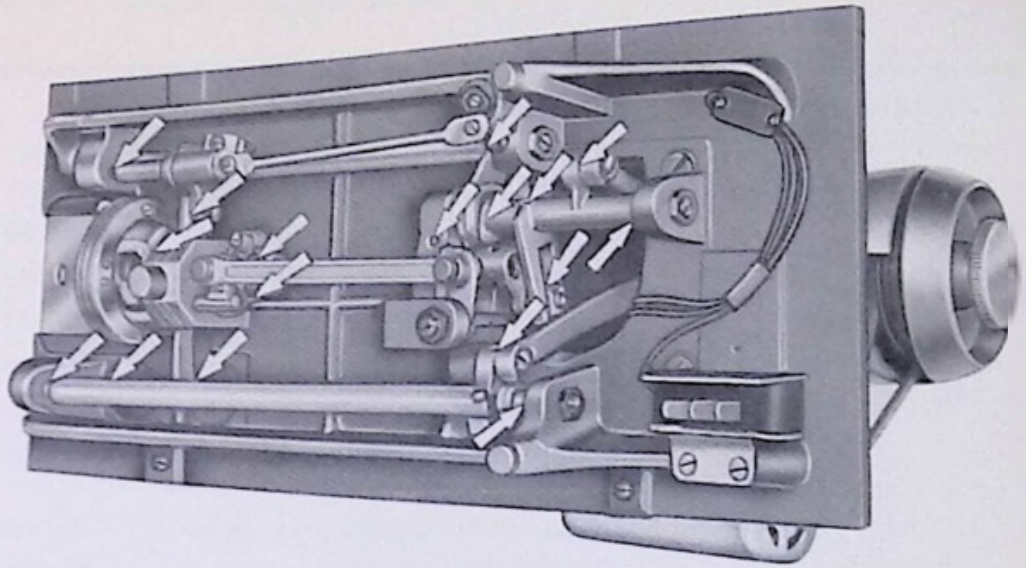


Fig. B

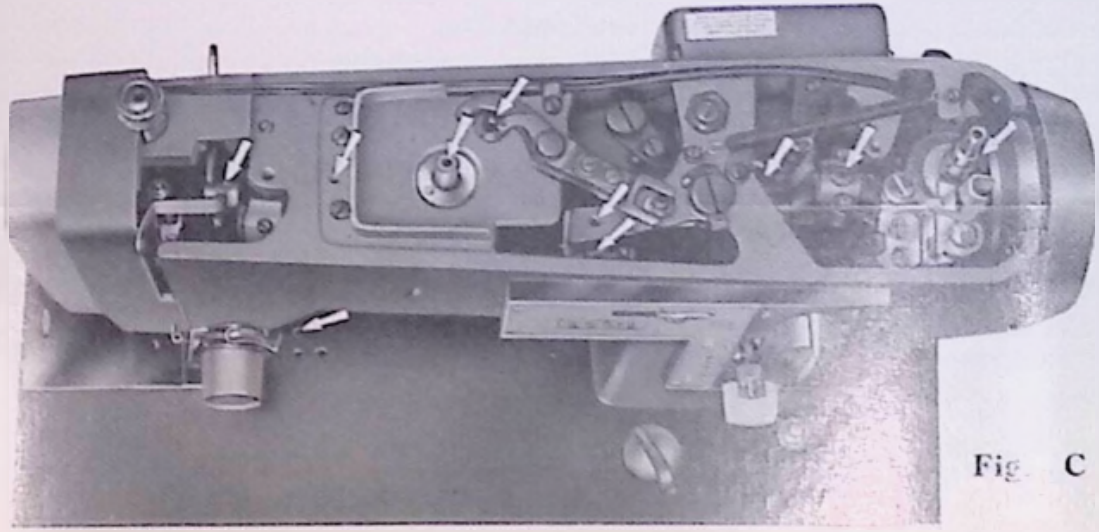


Fig. C

Remove arm cover plate to oil points indicated at top of machine head.

To remove cover plate, remove top screws and lift cover.

WHAT TO DO

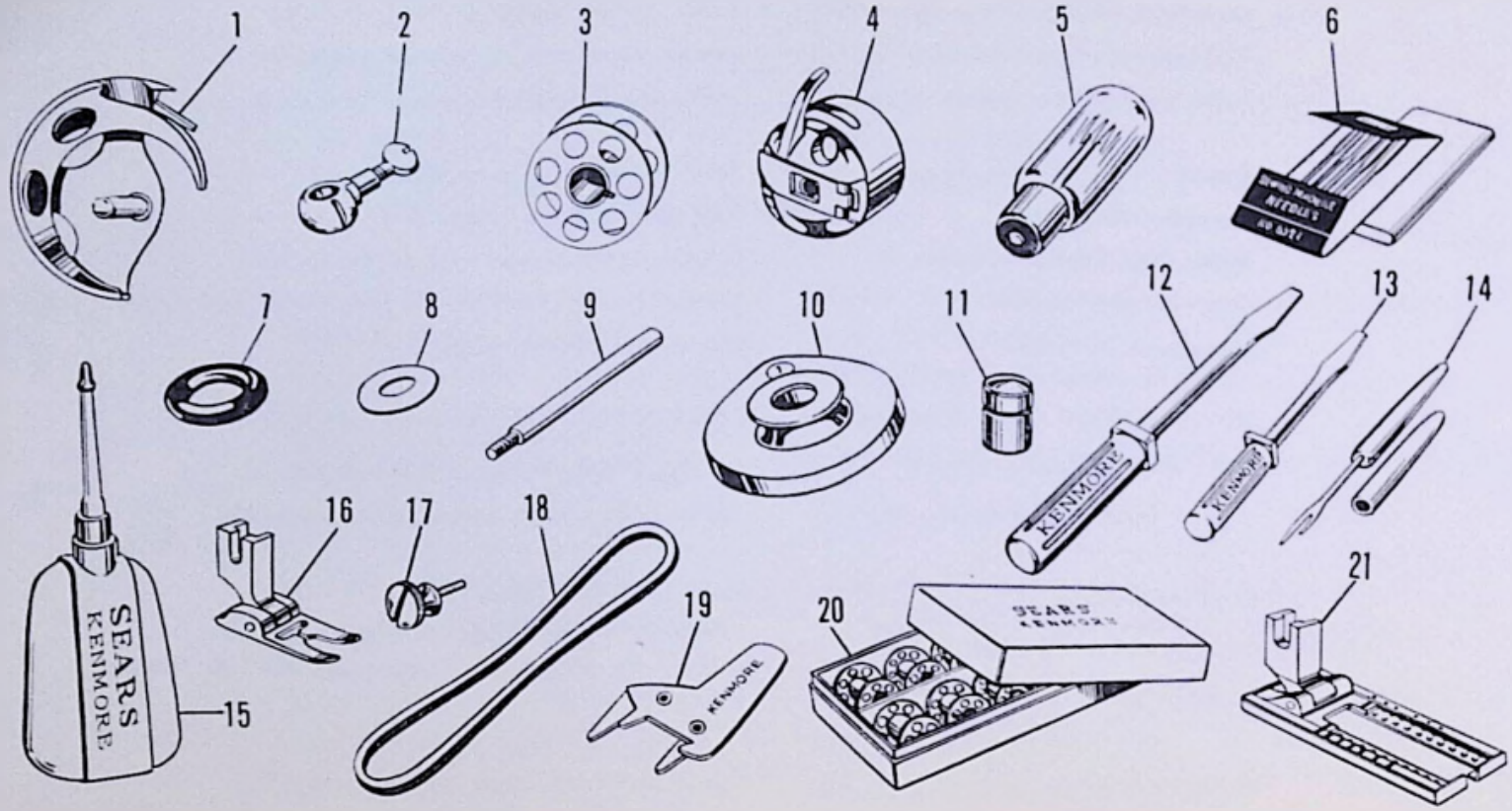
PROBLEM	PROBABLE CAUSE	CORRECTION
Irregular Stitches	Incorrect size needle.	Choose correct size needle for thread and fabric (page 5).
	Improper threading	Rethread machine (page 9).
	Loose upper thread tension.	Tighten upper thread tension (page 12).
	Pulling fabric.	Do not pull fabric; guide it gently.
	Light pressure on presser foot.	Increase pressure on presser foot (page 10).
	Loose presser foot.	Reset presser foot (page 15).
	Unevenly wound bobbin.	Rewind bobbin (page 7).
Breaking Needle	Pulling fabric.	Do not pull fabric; guide it gently.
	Incorrect size needle.	Choose correct size needle for thread and fabric (page 5).
	Incorrect setting of needle.	Reset needle (page 5).
	Loose presser foot.	Reset presser foot (page 15).
Bunching of Thread	Upper and lower threads not drawn back under presser foot.	Draw both threads back under presser foot (page 10).
	Feed dog down.	Raise feed dog (page 15).
Puckering	Incorrect thread tension (s).	Reset thread tension (s) (pages 12, 13).
	Light pressure on presser foot.	Increase pressure on presser foot (page 10).
	Using two different sizes or kinds of thread.	Upper thread and bobbin thread should be same size and kind.
	Bent or blunt needle.	Insert new needle (page 5).
	Loose presser foot.	Reset presser foot (page 15).
	Fabric too sheer or too soft.	Use underlay of tissue paper when stitching.

WHAT TO DO

PROBLEM	PROBABLE CAUSE	CORRECTION
Skipping Stitches	Incorrect size needle.	Choose correct size needle for thread and fabric (page 5).
	Bent or blunt needle.	Insert new needle (page 5).
	Incorrect setting of needle.	Reset needle (page 5).
	Tight upper thread tension.	Loosen upper thread tension (page 12).
	Light pressure on presser foot.	Increase pressure on presser foot (page 10).
Breaking Upper Thread	Starting to stitch too fast.	Start to stitch at a medium speed.
	Improper threading.	Rethread machine (page 8, 9).
	Tight upper thread tension.	Loosen upper thread tension (page 12).
	Incorrect size needle.	Choose correct size needle for thread and fabric (page 5).
	Sharp eye in needle.	Insert new needle (page 5).
Breaking Bobbin Thread	Improper bobbin case threading.	Check bobbin case threading (page 8).
	Tight bobbin thread tension.	Loosen bobbin thread tension (page 13).
	Lint in bobbin case or shuttle.	Clean bobbin case and shuttle (page 25).
Fabric not Moving	Feed dog down.	Raise feed dog (page 15).
	Light pressure on presser foot.	Increase pressure on presser foot (page 10).
	Threads knotted under fabric.	Place both threads back under presser foot before beginning to stitch
Machine Jamming (Knocking Noise)	Thread caught in shuttle.	Disassemble and clean shuttle (page 25).

PARTS LIST

All parts listed here may be ordered through your nearest Sears or Simpsons-Sears retail store, catalog sales office or mail order house.



When ordering these parts, please be sure to mention the following references:

1. **Model & serial numbers of machine shown on the nomenclature plate. See page 2.**
2. **Parts number(s) and description(s) here.**

When ordering by mail, prices will be furnished on request, or parts will be shipped at prevailing prices and you will be billed accordingly.

Ref. #	Part #	Description
1	47	Shuttle hook
2	4611	Needle clamp
3	60502	Bobbin
4	60404	Bobbin case
5	3815	Light bulb
6	6021	Pack of assorted needle
7	1939	Bobbin winder rubber ring
8	2273	Nylon disc
9	8286	Thread spool pin
10	3065	Pattern disc # 0
	2700	Pattern disc # 1
	2701	Pattern disc # 2
	2702	Pattern disc # 3
	2703	Pattern disc # 4
10	2704	Pattern disc # 5
	2705	Pattern disc # 6
	2706	Pattern disc # 7
11	1222	Bobbin winder thread guide
12	3015	Large screw driver
13	3016	Small screw driver
14	60861	Buttonhole opener
15	60890	Sewing machine oil
16	4607	Presser foot
17	135	Presser foot thumb screw
18	60902	Motor rubber belt
19	60863	Needle threader
20	60860	Bobbin box with 10 bobbins
21	60855	Special buttonhole foot

M E M O

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If and when you need service, please be sure to mention the number shown on your nomenclature plate. See Page 2.

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